

Application No. 09/832,178  
Filed: April 10, 2001  
TC Art Unit: 2633  
Confirmation No.: 8822

REMARKS

The instant Amendment is filed in response to the official action dated September 30, 2004. Reconsideration is respectfully requested.

The status of the claims is as follows:

Claims 1, 3-7, and 9-16 are currently pending.

Claims 1, 3-7, and 9-16 stand rejected.

Claims 1, 3-4, 7, 9-10, 13, and 15 have been amended.

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) as not showing every feature of the invention specified in the claims. Specifically, the official action indicates that "a tunable optical filter", as recited in claim 6, and "a tunable laser", as recited in claim 12, must be shown or the features canceled from the claims. The Applicants have amended Fig. 1a to include respective blocks corresponding to the tunable optical filter and the tunable laser. No new matter has been added. Accordingly, the Applicants respectfully submit that the drawing figures including Fig. 1a satisfy the requirements of section 1.83 of the Patent Rules.

The Examiner has rejected claims 3-4 and 9-10 under 35 U.S.C. 112, second paragraph, for not particularly pointing out and distinctly claiming the subject matter which the Applicants regard

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as their invention. Specifically, with respect to claims 3-4, the official action indicates that there is insufficient antecedent basis for the limitation "The optical add/drop multiplexor of claim 2". The Applicants have amended claims 3-4 to recite "The optical add/drop multiplexor of claim 1". Further, with respect to claims 9-10, the official action indicates that there is insufficient antecedent basis for the limitation "The optical add/drop multiplexor of claim 8". The Applicants have amended claims 9-10 to recite "The optical add/drop multiplexor of claim 7". Accordingly, the Applicants respectfully submit that amended claims 3-4 and 9-10 satisfy the requirements of section 112 of the Patent Laws and, as such, are in a condition for allowance.

The Examiner has rejected claims 1, 3-5, 7, 9-11, and 13-16 under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (USP 6,512,613) in view of Tai (USP 6,275,322). Specifically, the official action indicates that the Tanaka reference differs from claims 1 and 13 (and claims 7 and 15) in that it does not disclose the de-interleaver (interleaver) having an architecture comprising a plurality of hierarchical levels, at least one optical signal de-interleaver (interleaver) module being disposed in each one of the hierarchical levels. The official action further indicates that the Tai reference discloses a de-interleaver (interleaver)

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having such an architecture with a plurality of hierarchical levels. The official action concludes that it would have been obvious to an artisan at the time of the invention to replace the de-interleaver (interleaver) of Tanaka et al. with the de-interleaver (interleaver) of Tai.

The Applicants have amended claim 1 include the limitation "wherein at least one selected dropped wavelength is accessible at each hierarchical level of the de-interleaver architecture for subsequent provision to the second drop path". Similarly, the Applicants have amended claim 13 to include the limitation "wherein at least one selected dropped wavelength is accessible at each hierarchical level of the de-interleaver architecture". In addition, the Applicants have amended claim 7 include the limitation "wherein at least one selected add wavelength is accessible at each hierarchical level of the interleaver architecture for subsequent generation of the add traffic". Similarly, the Applicants have amended claim 15 to include the limitation "wherein at least one selected add wavelength is accessible at each hierarchical level of the interleaver architecture". The notion of accessing carrier wavelengths at any selected level of the respective hierarchies of the optical signal

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de-interleaver and the optical signal interleaver is described on page 17, line 29, to page 18, line 10, of the application.

As indicated in the official action, the Tanaka reference does not specifically disclose an optical signal de-interleaver/interleaver architecture comprising a plurality of hierarchical levels. Although the Tai reference discloses an optical de-interleaver (see Fig. 13 of Tai) and an optical interleaver (see Fig. 14 of Tai), the Tai reference merely indicates that the optical de-interleaver of Fig. 13 is configured for converting from an optical channel scheme having 50 GHz spacing to an optical channel scheme having 1300 GHz spacing (see column 13, lines 48-51, of Tai). Similarly, the Tai reference indicates that the optical interleaver of Fig. 14 is configured for converting from an optical channel scheme having 200 GHz spacing to an optical channel scheme having 50 GHz spacing (see column 14, lines 18-21, of Tai).

The Applicants respectfully submit that neither the Tanaka reference nor the Tai reference, taken alone or in combination, discloses an optical add/drop module including an optical signal de-interleaver/interleaver having an architecture with a plurality of hierarchical levels, in which at least one selected dropped/add wavelength is accessible at each hierarchical level of the

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architecture, as recited in amended claims 1, 7, 13, and 15. This is because none of the cited references recognizes the important advantages derived from such an optical add/drop module arrangement. For example, by accessing carrier wavelengths at any selected level of the respective module hierarchies, the optical add/drop multiplexor may be re-configured without having to install or remove individual optical signal de-interleaver modules and/or optical signal interleaver modules. Further, such re-configuration is achieved without interrupting or blocking any carrier wavelengths processed by the optical signal de-interleaver and interleaver modules (see page 18, lines 10-18, of the application).

Because neither Tanaka et al. nor Tai, taken alone or in combination, teaches or suggests an optical add/drop module including an optical signal de-interleaver or interleaver having an architecture with a plurality of hierarchical levels, in which at least one selected dropped or add wavelength is accessible at each hierarchical level of the architecture, as recited in amended claims 1, 7, 13, and 15, the suggested combination of the Tanaka and Tai references does not render amended claims 1, 7, 13, and 15 obvious. Accordingly, it is respectfully submitted that the

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rejections of claims 1, 7, 13, and 15 and the claims dependent therefrom are unwarranted and should be withdrawn.


In view of the foregoing, it is respectfully submitted that the present application is in a condition for allowance. Early and favorable action is respectfully requested.

The Examiner is encouraged to telephone the undersigned Attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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